NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

F A C T S H E E T
(pursuant to NAC 445A.236)

Permittee Name: Nevada Power Company
P.O. Box 98910 MS #30
Las Vegas, Nevada 89151

for the

Silverhawk Generating Station
15111 Apex Power Parkway
North Las Vegas, Clark County, Nevada 89124

Permit Number: NEV2003501

Description of Discharge: Wastestreams generated at the facility derived from the auxiliary cooling tower, evaporative coolers and small quantities of reject water from the brine concentrator. Water treatment systems in use are designed to allow the water to be recycled approximately 7 times for plant reuse. Salinity in the cooling tower is controlled by discharging blowdown water from the cooling tower to a brine concentrator. The brine concentrator removes the salts and recycles 95% of the of the blowdown water back to the cooling and steam water system. The brine concentrator uses a distillation process to recover the water and remove the salts. Of the remaining 5%, approximately 2% evaporates and 3% of the brine concentrate is discharged into two 0.8 acre, double lined (30 mil XR-5 geomembrane) evaporation ponds with leak detection, collection, and recovery systems. Discharges are batch discharges followed by pipe flushing discharges of service water. There is also a third 0.9 acre double lined (60 mil HDPE) Brine Concentrator Surge Pond (BCSP) with leak detection and collection system intended to hold auxiliary cooling tower blowdown water and other flows when the brine concentrator is off-line for repairs. Small amounts of service water from floor drains, washdown water, and effluent from an oil-water separator are also discharged into to the evaporation ponds via the brine concentrator. Stormwater is directed to an onsite conveyance system which discharges stormwater offsite. The permit is a zero discharge permit.

Location: The Silverhawk Power Plant is located within the Apex Industrial Park approximately 20 miles northeast of Las Vegas, in Dry Lake Valley, Clark County, Nevada. U.S. Highway I-15 East is about 4 miles east of the plant site, and State Route 93 is about 1.25 miles northeast of the facility. The site is accessed from SR 93 by a light duty road, Apex Power Parkway. The Moapa Energy Facility lies about 1.5 miles south of Silverhawk, and the Mirant Power Plant lies about .5 mile north of Silverhawk.

Latitude: 36^{o} 24' 35"N.; Longitude: 114^{o} 57' 38"W

Section 5, T. 18S., R. 63E. MDB&M

Flow: Monitor and Report. A flow of 0.0613 MGD (43 GPM) is the maximum daily flow estimated for disposal to the ponds; the 30-day average flow is 0.0545 MGD (38.0 GPM).

Parameters: Monitored and Reported Quarterly: TDS, pH, Temperature, and TPH

Monitored and Reported Annually: Oil and Grease, 13 Priority Pollutant Metals

General: Nevada Power operates the Silverhawk Generating Station, a nominal 580 megawatt (MW) combined cycle natural gas fired power plant. The Silverhawk power generation facility consists of two (2) natural gas fired combustion turbine generators with inlet air chillers, two (2) heat recovery steam generators (HRSGs), and one (1) steam turbine generator with an air-cooled condenser.

Raw water (groundwater) is supplied to the facility via an onsite well. Recycled water undergoes enhanced recovery water treatment with chemicals to control biological growth, scaling and corrosion during use in the cooling towers, inlet chillers and evaporative cooler. Some of this water is demineralized by a reverse osmosis treatment system prior to use as boiler feed water for the steam turbines and HRSGs. A mixture of well water and demineralized water is used as makeup water to the cooling tower, inlet chillers and evaporative cooler.

The two evaporation ponds - Ponds A and B - together have approximately 1.6 acres of surface area with a 3 foot freeboard. Each pond is individually lined with two liners of 30-mil XE-5 membrane primary liner and secondary liners with a leak detection and collection and recovery system between the two. Six-inch diameter sand filled flexible tubes are installed on the primary liner to prevent wind uplift. The dike areas surrounding the ponds are wide enough to provide access for inspection, monitoring and maintenance.

The wastestream influent delivery system is a 2" pipe which is designed with a swing pipe to discharge to either pond; a 4" pipe is designed and installed to carry brine concentrator effluent to the brine concentrator pond. The entire pond area is fenced with a 6-foot high chain link fence topped with barbed wire. Tortoise protection fences are installed at the base of the chain link fencing.

The third pond is the Brine Concentrator Surge Pond, and it is 0.9 acres in size with a 3 foot freeboard. The pond is double lined with 60 mil HDPE with a leak detection, collection and recovery system.

The Permittee has applied for renewal of a permit to discharge the facility wastestreams to the evaporation ponds; this is a zero discharge permit.

Receiving Water Characteristics: Groundwater below the plant and within a one mile radius is in excess of 860 feet below ground surface. The water supply well drilled and completed on the property is 2,028 feet deep, with a static water level about 686 feet below ground surface. Water quality is generally good, and meets drinking water standards.

Procedures for Public Comment: The notice of the Division's intent to issue a permit authorizing the facility to discharge to the evaporation pond cells subject to the conditions contained within the permit, is being sent to the **Las Vegas Review-Journal** for publication.

The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing or by phone/FAX for a period of 30 days following the date of the public notice, by October 8, 2008. The comment period can be extended at the discretion of the Administrator.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing scheduled by the Administrator must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238. The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Proposed Determination: The Division has made the tentative determination to reissue the proposed permit for a 5-year period.

Proposed Effluent Limitations, Schedule of Compliance and Special Conditions

Flow:	No limit, Monitor and Report.		
TDS:	Monitor and Report	pH:	Monitor and Report
Oil & Grease:	Monitor and Report	TPH:	Monitor and Report
TEMPERATURE:	Monitor and Report	PP METALS SCAN	Monitor and Report

Any revisions to the Operations and Maintenance Manual (O&M) for the pond and ancillary wastewater systems shall be submitted to the Division by December 30, 2008.

Rationale for Permit Requirements Monitoring is required to characterize the water quality contained in the evaporation ponds and the quantity disposed into the ponds.

Prepared by: Icyl Mulligan, 8/08

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